



Central Intelligence Agency  
Office of the Deputy Director for Science & Technology

Executive Registry

83-3851/1

5 August 1983

NOTE FOR: DDCI

SUBJECT: Re NASA Proposal to Use Elements  
of the STS to Create an ELV

John:

You asked if it were true that the answer to a shuttle catastrophe is (per Jim Beggs) the availability of Shuttle Solid Rocket Boosters from which ELVs could be developed. The attached shows you that we are a long way from that point.

Evan

Attachments

1. Note from DD/OD&E, dtd 3 Aug 83
2. Ltr to P. Thayer, dtd 27 Jul 83

add &  
include in SIG  
space material  
for 8/10

NASA Review Completed.



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## ROUTING AND RECORD SHEET

SUBJECT: (Optional)

FROM:

EXTENSION

NO.

DATE

8/3/83

TO: (Officer designation, room number, and building)

DATE

OFFICER'S INITIALS

COMMENTS (Number each comment to show from whom to whom. Draw a line across column after each comment.)

RECEIVED

FORWARDED

1.

R. E. Hineman

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L285

3 August 1983

NOTE TO: R. E. Hineman

FROM: 

Evan:

In response to your question regarding the NASA proposal to use elements of the STS to create an ELV, we have taken a quick in-house look at it, and I contacted NASA as well.

The way we see it, it would indeed be possible to use the solid motors as the basis for a launch vehicle. By judicious staging and with an appropriate third stage, a lift capability of between 25K and 35K lbs. would be possible. We have no idea how much it would cost, however; nor do we know if a third stage exists.

NASA pretty well confirms our estimate; although they have looked at more exotic combinations, including a recoverable liquid booster stage, they apparently have not done much more thinking on the subject than we have. This is not too surprising, considering their all-consuming commitment to STS.

At a meeting in Colorado Springs last week, the issue was the subject of discussion at a NASA-sponsored symposium on future launch vehicles. One of the approaches discussed was the use of the STS as the basis for a future ELV. Some of the Centers apparently had been doing back-of-the-envelope calculations and had submitted proposals to study the matter further.

The bottom line of all of this is that it is possible to take pieces of the STS and put together an ELV. The big questions are: 1) how many pieces can be used directly; 2) how many new designs are needed; 3) how much would it cost; 4) how would it compare to the French Ariane; and 5) perhaps most important, how would the Air Force take it, given that the principal function of this new launch vehicle would be for emergency launch of DoD satellites, which is clearly an Air Force responsibility.

My personal opinion is that the whole thing smells fishy; it looks like NASA is hoping that somehow this appeasement (to the long-standing Congressional and DoD concern about the potential impact of protracted stand-downs of the STS) will result in support and approval of their Space Station proposals.

If you would like further information or more details, please let me know.